THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ELAINE S. YAMAGUCHI

Appeal No. 96-2768
Application 08/118,377[1]

ON BRIEF

Before WEIFFENBACH, OWENS and KRATZ, *Administrative Patent Judges*.

WEIFFENBACH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the primary examiner's final rejection of claims 1, 2, 4 and 5. Claim 6, which is the only remaining pending claim in the application, has been indicated by the primary examiner as being allowable. We affirm.

[1] Application for patent filed September 8, 1993.

The Claimed Subject Matter

The claims on appeal are directed to a lubricating composition containing an alkylated aminophenol and a zinc dithiophosphate. On page 3 of the brief, appellant acknowledges all of the pending claims stand or fall together. Accordingly, we will limit our consideration to claim 1, the broadest independent claim, which reads as follows:

> 1. A lubricating oil composition comprising a major portion of at least one oil of lubricating viscosity, a minor portion of an alkylated aminophenol, and a minor portion of zinc dithiophosphate, wherein more than 50 mole %, but less than 100 mole %, of the alkyl groups of the zinc dithiophosphate are derived from primary alcohols, and wherein the alkyl group of the alkylated aminophenol has from 18 to 30 carbon atoms.

References of Record

The following references of record are relied upon by the examiner as evidence of obviousness:

Lange	4,320,020	Mar. 16, 1982
Schroeck	4,466,895	Aug. 21, 1984

The Rejection

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 103 as unpatentable over Lange in view of Schroeck.

Opinion

After careful consideration of the issues raised in this appeal and with the arguments of both the appellant and the examiner, we find that the rejection of claims 1, 2, 4 and 5 based upon the combined teachings of Lange and Schroeck is well founded and will be sustained essentially for the reasons advanced

by the examiner in the answer. Accordingly, we affirm the decision of the examiner, and offer the following in support thereof.

There appears to be no dispute that Schroeck discloses the zinc dithiophosphate as claimed by appellant. Appellant argues, however, that Lange does not show the alkylated aminophenol as claimed since Lange discloses alkyl groups from about 30 to about 750 carbon atoms (col. 2, lines 38-42). We agree with the examiner that the teaching of Lange overlaps appellant's claimed range of 18 to 30 carbon atoms. The term "about 30" permits some tolerance, and therefore encompasses values on either side of 30. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985); *In re Ayers*, 154 F.2d 182, 185, 69 USPQ 109, 112 (CCPA 1946).

Lange discloses a lubricating oil containing a minor amount of alkylated aminophenol which can function primarily as a detergent and dispersant (col. 8, lines 56-59; col. 10, lines 30-33). Lange further discloses that the lubricant can contain other additives such as antioxidation agents (col. 10, lines 33-39). Schroeck discloses adding a minor amount of a zinc dithiophosphate to a lubricating oil to give the oil antioxidant and antiwear properties (col. 1, lines 6-11; col. 2, lines 46-68; col. 14, Table I; claims 23-25). Schroeck's dithiophosphate has more than 50% and less than 100% of the alkyl groups derived from primary alcohols (col. 2, lines 46-65). Schroeck further contemplates that additives such as detergents and dispersants can also be added to his lubricating oil in addition to zinc dithiophosphate (col. 10, lines 62-68). From the combined teachings of Lange and Schroeck, we conclude that a person having ordinary skill in

the art would have been led to combine a minor amount of an alkylated aminophenol and a minor amount zinc dithiophosphate in a lubricating oil with the reasonable expectation that the oil will have detergent, antioxidant and antiwear properties. Accordingly, we find that the examiner has established a *prima facie* case of obviousness over the combined teachings of Lange and Schroeck. Having established a *prima facie* case, the burden shifts to appellant to rebut it.

Appellant urges that "neither Lange nor Schroeck nor their combination, teach that alkylated aminophenols would enhance the valve train wear inhibition performance of primary alcohol-derived zinc dithiophosphates so that we can take advantage of their thermal stability." According to appellant, primary alcohol-derived zinc dithiophosphates are more thermally stable than secondary alcohol-derived dithiophosphates, but that the primary alcohol-derived zinc dithiophosphates have the disadvantage of not being as effective in valve train wear inhibition as the secondary alcohol-derived zinc dithiophosphates. Appellant has discovered that combining an alkylated aminophenol wherein the alkyl group has 18-30 carbon atoms with a zinc dithiophosphate wherein more than 50 mole %, but less than 100 mole %, of the alkyl groups of the zinc dithiophosphate are derived from primary alcohols enhances the ashless wear inhibition performance of the zinc dithiophosphate. Appellant points us to the data in Tables I, II and III on pages 16-18 of the specification as showing unexpected improved performance when the claimed alkylated aminophenol and zinc dithio-phosphate are combined. We have considered this data, but we agree with the examiner that it does not rebut the *prima facie* case.

While the data in Table I shows that a lubricant containing 0.08% of a primary alkyl zinc

dithiophosphate and 1% of an alkylated aminophenol prepared in accordance with appellant's Example 4 resulted in significantly less cam and lifter wear when compared to a lubricant containing zinc dithiophosphate, but without the aminophenol, we agree with the examiner that the showing is not commensurate in scope with the claimed composition. Appellants* claims encompass a wide variety of alkylated aminophenols and zinc dithiophosphate compounds and amounts of each of these compounds. However, the comparison in Table I includes only one composition within the scope of claim 1. We find no reasonable basis for concluding that the great number of compositions encompassed by appellant*s claim 1 would behave as a class in the same manner as the particular composition tested. *See In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972); *In re Susi*, 440 F.2d 442, 445-46, 169 USPQ 423, 426 (CCPA 1971).

As for the data presented in Tables II and III, appellant has not met her burden of explaining and interpreting the results shown in these tables. We are unable to determine how to interpret the data for the "Falex Torque," "Four Ball Load Wear Index" and "Timken EP." Even if the meaning of the results presented by the data had been explained by appellant, we find that the compositions being compared, Examples 11-14, are not within the scope of claim 1. Examples 7-14 do not set forth what molar amount the alkyl groups in zinc dithiophosphate were derived from primary alcohols. Also, we do not know if the composition contains a "minor portion" of zinc dithiophosphate as required by claim 1. The alkylated aminophenol added in Examples 11-14 appears to be a particular alkylated aminophenol, but appellant has not identified the specific compound. Even if it is the alkylated aminophenol prepared in Example 4, the

showing is not commensurate in scope with appellant's claim 1 because the compositions represented in Examples 11-14 do not represent the wide variety of aminophenols encompassed by appellant's claim. For the foregoing reasons, we do not find that the data in Tables II and III establish unexpected results to rebut the *prima facie* case.

Appellant argues that the examiner was in error in discounting the teachings of the Ramakumar reference which appellant cited in her response to the examiner's first action on the merits (see paper no. 6). According to appellant, the reference teaches "the unpredictability of formulation art in the area of lubricant compositions as shown by conclusions that a zinc dithiophosphate-amino-type dispersant is antagonistic to antiwear action" (brief: p. 10). The antagonistic effect disclosed by the reference is limited to a showing of a single class of non-aromatic amino dispersants, namely, polyisobutylene succinimide-type dispersants. We do not find that the reference contains a general teaching which would have led a person having ordinary skill in the art to conclude that combinations of aminophenol-type dispersants and zinc dithiophosphates are antagonistic to antiwear action.

For the foregoing reasons, we conclude that the examiner has made out a *prima facie* case of obviousness over the teachings of Lange and Schroeck with regard to the rejection of claims 1, 2, 4 and 5 under 35 U.S.C. § 103. On consideration of all the evidence, the greater weight favors unpatentability. *In re Rijckaert,* 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re Piasecki,* 745 F.2d 1468, 1471-73, 223 USPQ 785, 787-88 (Fed. Cir. 1984. Accordingly, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CAMERON WEIFFENBACH Administrative Patent Judge	))))) BOARD OF PATENT
TERRY J. OWENS Administrative Patent Judge	)) APPEALS AND)) INTERFERENCES
PETER F. KRATZ Administrative Patent Judge	))

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Chevron Corporation
Law Department
Patent and Licensing Unit
P.O. Box 7141
San Francisco, CA 94120-7141